

TEMELYANOVA, N.

BENEDIKTOV, I.A., redaktor; GRITSENKO, A.V., redaktor; IL'IN, M.A., zamestniel' glavnogo redaktora, LAPTEV, I.D., LISKUN, Ye.F.; LOBANOV, P.P., glavnnyy redaktor; LYSenko, T.D.; SKRYABIN, K.I.; STOLETOV, V.H.; PAVLOV, O.I., kandidat sel'skokhozyaystvennykh nauk, nauchnyy redaktor; SOKOLOV, N.S., professor, nauchnyy redaktor; ANTIPOV-KARATAYEV, I.N., doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; KARPINSKIY, N.P., kandidat sel'skokhozyaystvennykh nauk, nauchnyy redaktor; SHESTAKOV, A.G., doktor sel'skokhozyaystvennykh nauk, professor, nauchnyy redaktor; RUBIN, B.A., doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; KOMARNITSKIY, N.A., dotsent, nauchnyy redaktor; LYSenko, T.D., akademik, nauchnyy redaktor; POLYAKOV, I.M., professor, nauchnyy redaktor; SHCHEGOLEV, V.N., doktor sel'skokhozyaystvennykh nauk, professor, nauchnyy redaktor; YAKUSHKIN, I.V., akademik, nauchnyy redaktor; LARIN, I.V., professor, doktor biologicheskikh nauk, nauchnyy redaktor; SMELOV, S.P., professor, doktor biologicheskiy nauk, nauchnyy redaktor; DEL'SHTEYN, V.I., professor, doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; SHCHERBACHEV, D.M., professor, doktor meditsinskikh nauk, nauchnyy redaktor; OGOL'EVTs, G.S., kandidat sel'skokhozyaystvennykh nauk, nauchnyy redaktor; YAKOVLEV, P.N., akademik, naychnyy redaktor; YAKIMOV, V.P., agronom, nauchnyy redaktor [deceased], YATINGEN, G.P., professor, doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; TIMOFEEV, N.N., professor, nauchnyy redaktor; TUROV, S.I., professor, doktor biologicheskikh nauk; YUDIN, V.M., akademik, nauchnyy redaktor; LISKUN, Ye.F., akademik, nauchnyy redaktor; VITT, V.O., professor, doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; KALININ, V.I.. kandidat sel'skokhozyaystvennykh nauk. nauchnyy redaktor.

(Continued on next card)

BENEDIKTOV, I.A.--- (continued) Card 2.

GRIBEN', L.K., akademik, nauchnyy redaktor; NIKOLAYEV, A.I., professor, doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; RED'KIN, A.P., professor, doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; SMETNEV, S.I., professor, doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; POPOV, I.S., professor, doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; MANTSEYFEL', P.A., professor nauchnyy redaktor; INIKHOV, G.S., professor, doktor khimicheskikh nauk, nauchnyy redaktor; ANFIMOV, A.N., professor, nauchnyy redaktor; GUBIN, A.F., professor, doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; POLTEV, V.I., professor, doktor veterinarnykh nauk, nauchnyy redaktor; LINDE, V.V., professor, doktor tekhnicheskikh nauk, nauchnyy redaktor; CHERGAS, B.I., professor, doktor biologicheskikh nauk, nauchnyy redaktor; NIKOL'SKIY, G.V., professor, nauchnyy redaktor; AVTOKRATOV, D.M., professor, doktor veterinarnykh nauk, nauchnyy redaktor; IVANOV, S.V., professor, doktor biologicheskikh nauk, nauchnyy redaktor; VIKTOROV, K.P., professor, doktor veterinarnykh nauk, nauchnyy redaktor; KOLYAKOV, Ya.Ye., professor, doktor veterinarnykh nauk, nauchnyy redaktor; ANTIFIN, D.N., professor, doktor veterinarnykh nauk, nauchnyy redaktor; MARKOV, A.A., professor, doktor veterinarnykh nauk, nauchnyy redaktor; DOMRACHEV, G.V., professor, doktor veterinarnykh nauk, nauchnyy redaktor; OLIVKOV, B.M., professor, doktor veterinarnykh nauk nauchnyy redaktor [deceased]; FLEGMATOV, N.A., professor, doktor veterinarnykh nauk, nauchnyy redaktor; BOLTINSKIY, V.N., professor, doktor tekhnicheskikh nauk, nauchnyy redaktor; VIL'YAMS, Vl.P., professor, doktor tekhnicheskikh nauk, nauchnyy redaktor; KRASHOV, V.S., kandidat tekhnicheskikh nauk, nauchnyy redaktor;

(Continued on next card)

BENEDIKTOV, I.A.---(continued) Card 3.

YEVREMINOV, M.G., akademik, nauchnyy redaktor; SAZONOV, N.A., doktor tekhnicheskikh nauk, nauchnyy redaktor; MIKANDROV, B.I., inzhener, nauchnyy redaktor; KOSTYAKOV, A.N., akademik, nauchnyy redaktor; CHERKASOV, A.A., professor, doktor tekhnicheskikh nauk, nauchnyy redaktor; DAVITAYA, F.F., doktor sel'skokhozyaystvennykh nauk, nauchnyy redaktor; IVANOV, N.N., professor, doktor tekhnicheskikh nauk, nauchnyy redaktor; ORLOV, P.M., professor, doktor tekhnicheskikh nauk, nauchnyy redaktor, LOZA, G.M., kandidat ekonomicheskikh nauk, nauchnyy redaktor; CHERNOV, A.V., kontrol'nyy redaktor; ZAVARSKIY, A.I., redaktor; ROS-SOSHANSKAYA, V.A., redaktor; FILATOVA, N.I., redaktor; YEMEL'YANOVA, N.I., redaktor; SILIN, V.S., redaktor BRANZBURG, A.Yu., redaktor; MAGNITSKIY, A.V., redaktor terminov; KUDRYAVTSEVA, A.G., redaktor terminov; AKSENNOVA, A.P., mladshiy redaktor; MALYAVSKAYA, O.A., mladshiy redaktor; YEDOTOVA, A.F., tekhnicheskiy redaktor

(Continued on next card)

BENEDIKTOV, I.A.---(continued) Card 4.

[Agricultural encyclopedia] Sel'skokhoziaistvennaya entsiklopediya.  
Issledovaniya, perer. Moskva, Gos. izd-vo selkhoz. lit-ry. Vol.5. [T-IA.]  
1956. 663 p.  
(Agriculture--Dictionaries and encyclopedias)

ZHURAVEL', Aleksandr Aronovich, prof.; YEMEL'YANOVA, N.I., red.;  
ZUBRILINA, Z.P., tekhn.red.

[Manual of practical work in the pathological physiology of  
animals] Rukovodstvo k prakticheskim занятиям по патоло-  
гической физиологии животных. Izd.2., dop. Moskva, Gos.  
izd-vo sel'shkhz.lit-ry, 1960. 199 p. (MIRA 13:6)  
(Veterinary pathology--Study and teaching)

BULKIN, P.I.; SARRE, D.M.; YEMEL'YANOVA, N.I.; KRATYNSKIY, V.I.,  
otv. red.; RUDAKOVA, N.I., tekhn. red.

[Official specifications and estimates for building, assembling, and repair work in 1960; estimates recalculated for the new price scale] Vedomstvennye normy i rastsenki na stroitel'nye, montazhnye i remontno-stroitel'nye raboty 1960 g.; rastsenki pereschitany iskhodia iz novogo masshtaba tsen. Moskva, Gosstroizdat. Collection V-48 [Building and assembling work using local materials in agriculture] Stroitel'nye i montazhnye raboty s primeneniem mestnykh materialov v sel'skom khoziaistve. 1961. 160 p. (MIRA 17:3)

1. Russia (1923- U.S.S.R.) Ministerstvo sel'skogo khozyaystva.

GOREGLYAD, Kh.S.; KORYAZHNOV, V.P.; SHLIPAKOV, Ya.P.; YEMEL'YANOVA, N.I.,  
red.; ZAVARSKIY, A.I., red.; BESKLEBNYI, Yu.A., red.; USTIMENKO,  
L.F., red.; GOR'KOVA, Z.D., tekhn.red.

[Technology and veterinary inspection of animal products] Veteri-  
narno-sanitarnaia ekspertiza s osnovami tekhnologii produktov  
zhivotnovodstva. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 355 p.  
(MIRA 13:12)

(Animal products) (Meat inspection)

KOLYAKOV, Yakov Yefremovich, prof., zasluzhennyy deyatel' nauki RSFSR;  
YEMEL'YANOVA, N.I., red.; PEVZNER, V.I., tekhn.red.

[Veterinary microbiology] Veterinarnaya mikrobiologiya. Izd.2.,  
dop. i ispr. Moakva, Gos.izd-vo sel'khoz.lit-ry, 1960. 409 p.  
(MIRA 14:2)

1. Moskovskaya veterinarnaya akademiya (for Kolyakov).  
(Veterinary bacteriology)

YERSHOV, V.S., prof., doktor veter.nauk; ZHURAVEL', A.A., prof., doktor veter.nauk; PREOBRAZHENSKIY, N.M., dotsent, kand.veter.nauk; YEL'TSOV, S.G., prof., doktor veter.nauk; ITKIN, B.Z., dotsent; NOSKOV, N.M., dotsent, kand.veter.nauk; YEVGEN'YANOVA, N.I., red.; BALLOD, A.I., tekhn.red.

[Principles of veterinary medicine] Osnovy veterinarii. Izd.2., ispr. i dop. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 437 p.

(MIRA 13:10)

1. Direktor Vsesoyuznogo instituta gel'mintologii im. K.I. Skryabin (for Yershov). 2. Zaveduyushchiy kafedroy fiziologii Leninskogo veterinarnogo instituta (for Zhuravel'). 3. Moskovskaya veterinarnaya akademiya (for Preobrazhenskiy). 4. Zaveduyushchiy kafedroy operativnoy khirurgii Moskovskoy veterinarnoy akademii (for Yel'tsov). 5. Zaveduyushchiy kafedroy epizootologii Orenburgskogo sel'skokhozyaystvennogo instituta (for Noskov).

(Veterinary medicine)

BOL', K.G., prof. (1871-1959); BOL, B.K., prof. (1897-1958). Prinimali  
uchastiye: AKULOV, A.V., dots.; FEDOROV, A.I., prof.; NALETOV,  
N.A., doktor veter. nauk, prof., red.; YEMEL'YANOVA, N.I., red.;  
PEVZNER, V.I., tekhn. red.; TRUKHINA, O.N., tekhn. red.

[Fundamentals of the pathological anatomy of farm animals] Osno-  
vy patologicheskoi anatomii sel'skokhoziaistvennykh zhivotnykh.  
Izd.3. Moskva, Gos. izd-vo sel'khoz. lit-ry, zhurnalov i pla-  
katov, 1961. 571 p. (MIRA 15:3)  
(Veterinary anatomy) (Veterinary pathology)

ACC NR: AP6008304

SOURCE CODE: UR/0237/66/000/002/0025/0028

AUTHOR: Buzhinskiy, I. M.; Yemel'yanova, N. I.

53

B

ORG: none

TITLE: Structural changes in color centers during heat treatment of glasses colored with Cd, S and Se compounds

SOURCE: Optiko-mekhanicheskaya promyshlennost', no. 2, 1966, 25-28

TOPIC TAGS: glass, cadmium, sulfur, selenium, optic density, color center, heat effect, absorption spectrum

ABSTRACT: The authors study changes which take place in the absorption spectra of selenium-vanadium glass as a function of heat treatment and the ratios of coloring additives: cadmium, selenium and sulfur. It was found that the optical density curves for all glasses go through three phases regardless of the composition and ratios of the coloring components. The first phase takes place at low initial heat treatment temperatures. The change in optical density at this stage conforms to Beer law and is a function of the duration of heat treatment and the concentration of dyes. These glasses show either weak luminescence or none at all. The second phase is observed at higher temperatures. Absorption increases as the temperature is raised throughout the entire spectrum although the nature of curves for the logarithm of optical density changes. A maximum or inflection is observed in the curves at the fundamental absorp-

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UDC: 666.11.01 : 539.213.1 : 666.124.2

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tion edge. As the temperature is raised, this maximum becomes more clearly pronounced with a steeper drop. The maximum and the descending section are shifted toward greater wavelengths. All glasses with an excess of Cd as well as those with a deficiency of Cd and more Se than S show the most sharply pronounced maximum at the end of this phase. Glasses with a deficiency of Cd and more S than Se show a gradual reduction in the maximum toward the end of this phase. These types of glasses are luminescent. The third heat treatment phase begins at still higher temperatures and is completely dependent on the ratio of dye components contained in the glass. All glasses with an excess of cadmium as well as those with a deficiency of cadmium and more selenium than sulfur show a flatter maximum which continues to shift toward greater wavelengths while the optical density at the maximum decreases. Glasses with a deficiency of cadmium and more sulfur than selenium show a shift in the steep section of the curve toward the opposite direction, i. e. toward shorter wavelengths. All glasses become opalescent at higher temperatures. Luminescence is weaker in the opalescent glass. All glasses finally crystallize with colors from light yellow to orange and dark brown depending on the composition. A theoretical explanation is given for the experimentally observed phenomena based on changes in the energy state of the absorption centers.

Orig. art. has: 2 figures.

SUB CODE: 20,11/ SUBM DATE: 30Dec64/ ORIG REF: 005/ OTH REF: 003

Card 2/2 MJS

YEMEL'YANOVA, N.N. (Leningrad)

Electromyographic indexes of the impairment and restoration of the  
nervomuscular apparatus in polyarthritis under the influence of radon  
baths and physical therapy. Vrach.delo no.6:647-648 Je '59.  
(MIRA 12:12)

1. Bol'nitsa im. V.I. Lenina.  
(ELECTROMYOGRAPHY) (ARTHRITIS) (RADON--THERAPEUTIC USE)  
(PHYSICAL THERAPY)

NOVIKOVA, A.P.; YEMEL'YANOVA, N.N.

Gendon in hypertension. Sov. med. 24 no.4:121-126 Ap '60.  
(MIRA 13:8)

1. Iz tret'yej terapeuticheskoy kafedry (zav. - prof. B.V. Il'inskiy)  
Leningradskogo ordena Lenina instituta usovershenstvovaniya vrachey  
im. S.M. Kirova i iz ob"yedineniya bol'nitsy im. Lenina (glavnyy  
vrach V.S. Razumikhin).  
(RAUWOLFIA) (HYPERTENSION)

BORISOVA, L.I.; YEMEL'YANOVA, N.N.

Clinical observations on the effectiveness of nitranol and  
nitrosorbid in patients with angina pectoris. Terap.arkh.  
33 no.1:40-46 '61. (MIRA 14:3)

1. Iz 3-y kafedry terapii (zav. - prof. B.V. Il'inskiy) Lenin-  
gradskogo gosudarstvennogo ordena Lenina instituta usovershens-  
vovaniya vrachey imeni S.M. Kirova i bol'nitsy imeni V.I. Lenina.  
(NITRITES) (ANGINA PECTORIS)

EXCERPTA MEDICA Sec 6/Vol 13/6 Internal Medicine June 59

3226. ELECTROMYOGRAPHY IN DIAGNOSIS OF POLYARTHRITIS (Russian text) -  
Yemelianova N. N. - KLIN. MED. (Moskva) 1958, 36/5 (126-134)

Graphs 5

Patients with various types of polyarthritis were treated. The 1st group comprised patients with primary infectious non-specific polyarthritis of various degrees of severity and spread of contractures, ankyloses and deformities. There were specific qualitative changes in the electromyogram (EMG). Rhythmic grouping of the potentials alternated with periods of absent activity. These became longer in cases with more widespread articular lesions. In others, with far advanced contractures, the amplitude and frequency of the oscillations tended to diminish, thus showing marked functional disturbance of the motoneurons. The 2nd group comprised cases with dystrophic articular lesions without marked progression. Only quantitative changes in the EMG were found - some lowering of the amplitude and spacing of the potentials. These changes suggest that in rheumatoid arthritis of this latter group there is no marked alteration of the motoneuron functional capacity. By EMG the spread of neuro-muscular lesions in rheumatoid arthritis of various types may be studied. The method can be helpful in the choice of therapy and in the evaluation of its effect.

Tzontsheff - Plovdiv

713

otdel. fiziches. lechbenykh sredstv.  
Demograf. Sci Res Inst Physiotherapy  
and Kurortologij

POLYAKOV, M.F.; KONSTANTINOVSKIY, G.M. [Konstantinovskiy, H.M.];  
YEMEL'YANOVA, N.O. [Yemel'yanova, N.O.]

Use of synthetic adhesives for pasting labels on beer bottles  
(MIRA 18:4)  
Khar. prom. no. 1;56-57 Ja-Mr '65.

YEMEL'YANOVA, OLGA A.

"Without Error or Slow Down," Vest. Svyazi-Elektrsovyyaz', No. 6, 1948. Mbr.,

Stakhanovite Thousander, Central Telegraph, -c1948-

YEMEL'YANOVA, O. A.

USSR/Chemistry - Hydrocarbons  
Chemistry - Catalysis

Feb 49

"Irreversible Catalysis and Catalytic Dehydrogenation of Hydrocarbons on Activated Carbon," G. A. Rudakov, N. P. Borisova, O. A. Yemel'yanova, I. G. Yeroshevskiy, N. F. Komshilov, A. N. Makarova, N. M. Merlis, Z. S. Khomenko, Cen Sci Res Inst of Wood-Pulp Chem, 18 $\frac{1}{2}$  pp

"Zhur Priklad Khim" Vol XXII, No 2

Investigation carried out on pure terpenes and a naphthalene hydrocarbon, n-methane, showed that activated carbon brings about irreversible catalysis and dehydrogenation of hydrocarbons. This confirmed conclusions made long ago by Russian scientists working on pyrolysis of petroleum. Describes reactions in detail. Submitted 13 Mar 48.

PA 48/49T19

YEMEL'YANOVA, O.A.

Analysis of the formation and calculation of a rain flood flow in  
the basin of the upper Volga and the Oka. Trudy GGI no.99:195-  
260 '62. (MIRA 15:9)

(Volga River--Floods)

MATVEYEV, K.I.; OSIPOV, A.M.; ODYAKOV, V.F.; SUZDAL'NITSKAYA, Yu.V.;  
BUKHTOYAROV, I.A.; YEMEL'YANOVA, O.A.

Catalytic oxidation of ethylene in the presence of aqueous  
solutions of palladium salts. Kin.i kat. 3 no.5:661-673 S-0  
'62. (MIRA 16:1)

1. Institut kataliza Sibirsckogo otdeleniya AN SSSR.  
(Ethylene) (Oxidation) (Palladium salts)

YEMEL'YANOVA, O.I.; SHVETSOV, V.S.

Kittens as a model for the study of colienteritis. Zhur. mikrobiol.,  
epid. i immun. 40 no.4:93-96 Ap '63. (MIRA 17:5)

1. Iz Khar'kovskogo instituta vaktzin i syvorotok imeni Mechnikova  
i Khar'kovskogo veterinarnogo instituta.

MIKULINSKAYA, R.M.; FYADINA, D.D.; DROMASHKO, A.I.; SHULICHENKO, A.I.;  
ROMASHKO, Yu.V.; ZLATOPOL'SKAYA, R.D.; BERGOL'TSEVA, L.A.; VEREZUB,  
L.G.; CHAYKINA, T.N.; YEMEL'YANOVA, O.I.; GINZBURG, L.Ya.; GOLODYUK,  
L.F.; HUMYANTSEVA, I.V.; VYCHEGZHANIN, A.G.; GOL'DENBERG, R.A.

Data on the study of the epidemiological effectiveness of vaccination  
against influenza in Kharkov in October 1957. Vop.virus. 4 no.4:407-  
(MIRA 12:12)  
411 J1-Ag '59.

1. Khar'kovskiy institut vaktsin i syvorotok imeni I.I. Mechnikova.  
(INFLUENZA, prevention & control)

YEMEL'YANOVA, O.A.

Calculation of rain-caused flood discharge in the basins of the  
upper Volga and the Oka. Trudy GGI no.79:110-116 '60.  
(MIRA 15:8)

(Volga Valley—Runoff) (Oka Valley—Runoff)

GRES'-EDEL'MAN, B.Ye.; VEYTSMAI, R.Ye.; BILAYA, O.S.; OLEYNIKOVA, Ye.A.;  
YEMEL'YANOVA, O.I.; ISHCHENKO-LIMNIK, K.M.; VEL'VOVSKAYA, R.I.;  
RUMYANTSEVA, I.V.

Study of an outbreak of toxicoseptic diseases caused by  
Escherichia coli type O III. Zhur.mikrobiol.epid. i immun.  
30 no.5:145 My '59. (MIRA 12:9)

1. Iz Khar'kovskogo instituta vaktein i syvorotok imoni Michni-  
kova i Khar'kovskogo instituta okhrany materinstva i detstva.  
(INTESTINES--DISEASES)

GRES<sup>1</sup>-KIDEL'MAN, B.Ye.; BELAYA, O.S.; YANOVICH, O.I.; VEL'VOVSKAYA, R.I.; RUMYANTSEVA, I.V.; VEYTSMAN, R.Ye.; OLEYNIKOVA, Ye.A.; CHERNYAVSKAYA, K.L.; VOLINA, L.Ye.; VASILAVITSKAYA, S.M.

Investigation of the role of serological types of the coli bacillus in the etiology of acute intestinal diseases of young children. Pediatriia 37 no.5:10-16 My '59. (MIRA 12:8)

1. Iz Khar'kovskogo nauchno-issledovatel'skogo instituta vaktsin i syvorotok imeni Mechnikova (dir. - kand. biolog. nauk G.P. Cherkas) Khar'kovskogo nauchno-issledovatel'skogo instituta okhrany materninstva i detstva (dir. - kand. med. nauk A.I. Kornilova) i 21-y detskoj infektsionnoy bol'nitsy (glavnnyy vrach I.M. Chervontsev).

(ENTERITIS, in inf. & child

E. coli, etiol. role of different serotypes (Rus))

(ESCHERICHIA COLI, infect.

enteritis in inf., etiol. role of different serotypes (Rus))

YEMEL'YANOVA, O. I.

Cultural and biochemical properties of various pathogenic serological types of *Escherichia coli*. Mikrobiol. zhur. 23 no.3:  
46-49 '61. (MIRA 15:7)

1. Kharkovskiy nauchno-issledovatel'skiy institut im. Mechnikova.  
(*ESCHERICHIA COLI*)

30242  
S/145/60/000/0G2/010/020  
D221/D302

26.2/22

AUTHORS: Bykov, N.N., Yemin, O.N., and Cherkasov, B.A.,  
Candidates of Technical Sciences

TITLE: Selecting parameters for a partial gas turbine, and  
the effect of the degree of partiality on its  
characteristic

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Mashino-  
stroyeniye, no. 2, 1960, 98 - 110

TEXT: The drop in turbine efficiency due to shorter blades which  
are used for design considerations, can be improved by introducing  
a partial disposition of the diffusor on the periphery. This has,  
however, a detrimental effect as well. The authors carried out re-  
search on this matter using a model gas turbine, whose specifica-  
tions are described. Partiality was modified by covering some dif-  
fusor channels, when not only the ratio was changed, but also the  
disposition of distributor channels. Fig. 3 indicates the varia-  
tion of efficiency with ratio of partiality, when all ports were

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Selecting parameters for a partial ...

together (number of pairs of diffusors,  $i = 1$ ). The coefficient of efficiency is expressed as a ratio of internal work of the turbine to the adiabatic work of expansion. The similarity of conditions of gas turbine operation is given by two dimensionless parameters,  $\frac{u}{C_{ag}}$  and  $\sqrt{\frac{u}{T_0^*}}$ , and the results obtained were replotted in

relation to relative efficiency as a function of degree of partiality  $\epsilon$ . The curves reveal that the latter has a different effect on efficiency for various  $u/C_{ad}$ , and its optimum depends on the degree of partiality (dotted line). Data of different investigators were used for evaluating the blade height effect on turbine efficiency. The available results on the effect of height in a flat stationary diffusor needs systematizing. When selecting the optimum ratio of partiality and height of blades, the authors assumed that losses due to both are independent of each other, and therefore, the total effect of these can be assessed by the total coefficient of relative efficiency given in

$$\bar{\eta}_T(\epsilon, h) = \bar{\eta}_T \bar{\eta}_{Th} = f(\epsilon, h) \quad (7)$$

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D221/D302

Selecting parameters for a partial ...

Full line curves of Fig. 6 indicate the relationship between the relative coefficient of efficiency and height of blades for various values of  $\epsilon$ . Dotted lines show efficiency versus blade height, and correspondingly the ratio of partiality, with other parameters being constant. Analysis reveals that it is expedient in several cases to reduce the height of blades, rather than use low ratio of partiality. Similar graphs were plotted for other possible cases of effect due to blade height. Experiments demonstrated that the reaction of the partial turbine remains practically constant for a wide range of conditions. This simplifies the calculation of characteristics of these turbines. Decrease of reaction optimum is due to effects of losses in friction and ventilation which form a significant part of total losses. The above can be reduced with lower peripheral speed  $u$ . Passage to a two-segment inlet arrangement leads to fall in efficiency, compared to a single segment disposition. Axial clearance effect on this turbine was also investigated, and its increase caused a drop in efficiency. Stresses at the root of the blade in 8 open channels together are greater than in the case of 31 ports. Uniform distribution of ports is favora-

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Selecting parameters of a partial ...

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D221/D302

ble for stresses at the root of the blades. Increased axial clearance in a partial turbine reduces the above stresses. The analysis reveals that it is expedient to probe into the problem of optimum ratio of partiality in respect to the height of blades. This optimum depends in the first instance on losses related to partiality and the height of blades. The author admit that the results of their investigation are not universal and need a further increase in accuracy which can be achieved by detailed research. There are 12 figures, 1 table and 6 Soviet-bloc references.

ASSOCIATION: Moskovskiy aviatsionnyy institut (Moscow Aviation Institute)

SUBMITTED: December 15, 1959

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TSARAKOV, I.Ye.; YEMEL'YANOVA, N. S.

Readers' conference concerning IA. L. Serebrianyi's book  
"Electric smelting of copper-nickel ores and concentrates."  
TSvet. met. 38 no.11:66 N '65. (MIRA 18:11)

USSR/Medicine - Tularemia  
Muskrats, Diseases

Sep/Oct 50

"Susceptibility of Muskrats (*Ondatra zibethica* L.) to Infection by Tularemia," T. N. Dunsyera, O. S. Yemel'yanova, Lab of Tularemia, Div of Med Parasitol, Inst of Exptl Med Imenni Acad I. F. Gamaleya, Acad Med Sci USSR

"Zool Zhur" Vol XXIX, No 5, pp 459-465

Finds muskrats quite susceptible to subcutaneous infection, MLD being 1 - 10 standard units of Cen State Sci Control Inst of Bacteriol Prepn. Finds them somewhat more resistant to alimentary infection,

171775

USSR/Medicine - Tularemia (Contd)

Sep/Oct 50

10,000 - 10,000,000 units being required in this case. They are not infected by water with 1,000 units per cu cm. Transmission can be affected by contact and occurs orally. Chief of Lab, Prof N. G. Olsur'yev; Head of Div, Acad Ye. N. Pavlovsky; Dir of Inst, Prof V. D. Timakov, Corr Mem, Acad Med Sci USSR.

171775

YEMEL'YANOVA, O. S.

Medicine

Microbiology of tularemia. Moskva, Izd-vo Akademiy med. nauk SSSR, 1951.

Monthly List of Russian Accessions, Library of Congress, November 1952. Unclassified.

YEMEL'YANOVA, O. S.

USSR/Medicine - Modification of Micro- Nov 53  
organisms; Tularemia

"Morphology of Colonies and the Composition of the Population of Tularemia Cultures," O. S. Yomel'-yanova, Tularemia Lab, Div of Parasitol and Med Zool, Inst of Epidem and Microbiol im N.F. Gamaleya

Zhur Mikro, Epid, i Immun, No 11, pp 37-43

Using a special nutrient medium, colonies were grown from single tularemia bacteria. Differences in the biological characteristics of tularemia cultures are reflected in the morphology of colonies.

271T41

By studying the morphology of colonies, it has been established that both highly virulent cultures and avirulent cultures are homogenous in composition. Cultures with attenuated virulence consist of a mixt of weakly virulent, but immunogenic bacteria, avirulent bacteria, and non-immunogenic bacteria.

YEMEL'YANOVA, O.S.

OISUF'YEV, N.G.; YEMEL'YANOVA, O.S.

Mixed epizootic tularemia, listerellosis, and streptococcal infection among field voles during the winter. Zhur.mikrobiol.spid.i imun. no.2:36-41 F '54.  
(MLRA 7:3)

1. Iz laboratorii tulyaremii ot dela parazitologii i meditsinskoy zoologii (zaveduyushchiy otdelom akademik Ye.N.Pavlovskiy) Instituta epidemiologii i mikrobiologii im. pochetnogo akademika N.F.Gamalei Akademii meditsinskikh nauk SSSR (direktor - professor V.D.Timakov).

(Tularemia) (Streptococcus)  
(Field mice--Diseases) (Listerella)

YEMEL'YANOVA, O. S., OLSUF'YEV, N. G., and KOLYADITSKAYA, L. S.

"Results of Work on Preparing Live Tularemia Vaccines by a New Technique and From New Strains." [paper read at a session of the institute's Scientific Council held during the first half of 1955,] Proceedings. of Inst. Epidem and Microbiol im. Gamaleya 1954-56.

Division of Parasitology and Medical Zoology, Pavlovskiy, Yevgeniy Nikanorovich, Active Member of Academy of Medical Sciences, USSR, head. Inst. Epidem and Microbiol im. Gamaleya AMS USSR.

SO; Sum 1186, 11 Jan 57.

YEMEL'YANOVA, O. S.

"Study of the Variability of Tularemia Pathogens" [paper read at an unidentified scientific conference held by the institute during the first half of 1955] Proceedings of Inst. Epidem and Microbiol im. Gomaleya 1954-56.

Division of Parssitology and Medical Zoology, Pavlovskiy, Yevgeniy Nikanorovich, Active Member of Academy of Medical Sciences USSR, head. Inst. Epidem and Microbiol im. Gomaleya AMS USSR.

SO: Sum 1186, 11 Jan 57.

~~YEMEL'YANOVA, P.H.~~  
YEMEL'YANOVA, O.S.

Detecting listerellosis in common field voles in unthreshed grain  
and straw stacks in winter. Vop.kraev., ob.i eksp.paraz.i med.zool  
9:162-167 '55. (MLRA 10:1)

1. Iz Mezhrayonnoy protivotulyaremiynoy stantsii (nach. A.I.Nikolayeva)  
i laboratori i tulyaremii (zav. - prof. N.G.Olsuf'yev) otdela parazito-  
logii i meditsinskoy zoologii (zav. - aknd. Ye.N.Pavlovskiy) Instituta  
epidemiologii i mikrobiologii imeni N.F.Gamaleya (dir. - deystvitel'nyy  
chlen Akademii meditsinskikh nauk SSSR prof. G.V.Vygodchikov) Akademii  
meditsinskikh nauk SSSR.

(LISTERELLA) (FIELD MICE--DISEASES AND PESTS)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962630006-8

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962630006-8"

OISUFJEV, N.G.; EMEL'ANOVA, O.S.

The antigenic structure of *Bacterium tularensis*. *J. Hyg. Epidem., Praha*  
1 no.4:357-366 1957.

1. Gamaleye Institute of Epidemiology and Microbiology, Academy of  
Medical Sciences of the USSR, Department of Natural Focal Infections,  
Tularaemia Laboratories, Moscow.

(*PASTEURELIA TULARENSIS*, immunology,  
antigenic structure)

USSR / Microbiology. Microbes Pathogenic to Man  
and Animals. Tularemia Microbe.

F

Abs Jour : Ref. Zhur - Biol., No. 21, 1958, No 95182

Author : Yemel'yanova, O. S.

Inst :           

Title : Characteristics of Tularemic Vaccine Strains  
According to Laboratory Indicators.

Orig Pub : Zh. mikrobiol., epidemiol. i immunobiologii,  
1957, No. 8, 125-129.

Abstract : Experimental data are cited on the insufficient high qualities of an old variant of Gaysk's vaccine strain No 15 for the production of a cutaneous, dry, live tularemic vaccine. The characteristics of vaccine strains for tularemia prophylaxis which were given by Gaysk, Elbert and Faybich are broad

Card 1/3

USSR / Microbiology. Microbes Pathogenic to Man  
and Animals. Tularemia Microbe.

F

Abs. Jour

: Ref. Zhur - Biol., No. 21, 1958, No. 95182

and complementary with regard to laboratory indicators. Strains can be considered full-value which, with the subcutaneous introduction in mice of from 100 to 1 million microbe cells (20 mice per dose) caused death from the tularemia vaccine in 30-50% of the animals. Strains with less residual virulence are a weak vaccine, and with more are too strong - a reagent for people. Vaccine strains for cutaneous administration cause an inoculation reaction in guinea pigs with a content of 1 million bacteria per 1 ml. The broad and complementary characteristics of vaccine strains served as a basis for the present

Card 2/3

USSR / Microbiology. Microbes Pathogenic to Man  
and Animals. Tularemia Microbe.

F

Abs Jour : Ref. Zhur - Biol., No. 21, 1958, No. 95182

effective instructions in production, control  
and administration of cutaneous, live, dry  
tularemic vaccine. --- M. Ya. Boyarskaya.

Card 3/3

USSR/Microbiology - Microorganisms Pathogenic to  
Humans and Animals

F-3

Abs Jour: Ref Zhur - Biol., No 18, 1958, 81505

Author : Yemelyanova, O.S.

Inst : -

Title : A Non-Gaseous Variant of *Salmonella Typhimurium*  
Which Causes Epizootia Among Guinea Pigs,  
Similar to Pseudo-Tuberculosis of Rodents.

Orig Pub: Zh. mikrobiol., epidemiol. i immunobiologii,  
1957, No. 9, 63-64

Abstract: In a severe epizootia at the nursery for guinea  
pigs 86 strains of motile, gram negative, poly-  
morphic bacilli were isolated, identical in  
their biochemical properties with the pseudo-  
tuberculosis bacillus of rodents. The isolates  
were not lysed by the pseudotuberculosis bacte-

Card 1/2

USSR/Microbiology - Microorganisms Pathogenic to  
Humans and Animals

F-3

Abs Jour: Ref Zhur - Biol., No 18, 1958, 81505

riophage, and were weakly agglutinated by the serum against the causative agent of pseudo-tuberculosis, but were agglutinated to a high titer by sera against Breslau and paratyphus B bacilli. The serum, obtained by immunizing a rabbit, agglutinated paratyphus B culture in high dilutions and the Breslau bacillus at even greater dilutions. The Castellani reaction indicates the identity of the antigenic structure of the culture studied and *Salmonella typhimurium*. The author considers the causative agent of epizootia a variant of *S. typhimurium* which forms no gas. -- V.V. Vlodavets

Card 2/2

33

YEMEL'YANOVA, O.S.

Comparison of some culture media used in growing the tularemia pathogen.  
Lah.delo 4 no.6:36-39 N-D '58 (MIRA 11:12)

1. Iz laboratorii tulyaremii (zav. - prof. N.G. Oleuf'yev)  
Instituta epidemiologii i mikrobiologii imeni N.F. Gamalei  
AMN SSSR, Moskva.  
(PASTEURELLA TULARENSIS)  
(BACTERIOLOGY--CULTURE AND CULTURE MEDIA)

OLSFU'YEV, N.G.; YEMEL'YANOVA, O.S.; UGLOVOY, G.P.; SIL'CHENKO, V.S.;  
BORODIN, V.P.; SAMSONOVA, A.P.; KONKINA, N.S.; SHELAPOVA, G.M.;  
LEVACHEVA, Z.A.; TSAREVA, M.I.; ZYKINA, N.A.; LEEZDEVA, T.P.

Result of mass use with human subjects of dry tularemia vaccine  
prepared from restored Gaiskii No.15 and Emelianova No.155 strains.  
Zhur.mikrobiol.epid. i immun. 29 no.3:52-57 Mr '58. (MIRA 11:4)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gammalei MN SSSR,  
Voronezhskoy, Stalingradskoy, Moskovskoy, Tul'skoy oblastnykh, Altayskoy  
krayevoy sanitarno-epidemiologicheskikh stantsii i Omskogo instituta  
epidemiologii i mikrobiologii.

(TULAREMIA, immunology,  
vaccine, dry from Gaiskii's No.15 & Emelianova's No.155  
strains, mass application (Rus)

YEREL'YANOVA, O. S.

"The variability of the *tularemia* microbe under natural conditions." p. 177.

Desyatoye soveshchaniye po parazitologicheskim problemam i prirodoznaniiyu bloznyam. 22-29 Oktyabrya 1959 g. (Tenth Conference on Parasitological Problems and Diseases with Natural Foci 22-29 October 1959), Moscow-Leningrad, 1959, Academy of Medical Sciences USSR and Academy of Sciences USSR, No. 1 25kpp.

Inst. of Epidemiology and Microbiology, AMS USSR/ Moscow

Kazakhstan, U.S.S.R., (U.S.S.R.), 1959.

"Immunological and prophylactic effectiveness of antitularanic vaccination."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectiologists, 1959.

OISUFIEV, N.G.; EMELYANOVA, O.S.; DUNAYEVA, T.N.

Comparative study of strains of *B. Tularensis* in the old and new world and their taxonomy. J. Hyg. Epidem., Praha 3 no.2:138-149 1959.

1. Tularemia Laboratory of the Department of Natural Focal Infections, Gamaleya Institute of Epidemiology and Microbiology, Academy of Medical Sciences USSR, Moscow.  
(*PASTEURELLA TULARENSIS*, culture)

OLSUF'YEV, N.G., prof.; YEMEL'YANOVA, O.S., kand.biolog.nauk;  
DUMAYEVA, T.N., kand.biolog.nauk

Some difference in the causative agent of tularemia in the old  
and new world. Vest. AMN SSSR 14 no.6:51-58 '59. (MIRA 13:6)

1. Laboratoriya tulyaremii otdela prirodno-ochagovykh infektsii  
Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
2. Chlen-korrespondent AMN SSSR (for Olsuf'yev).  
(TULAREMIA)

YEMEL' YANOVA, O.S.

Variability of *Pasteurella tularensis* when kept by various methods under laboratory conditions. Zhur.mikrobiol.epid. i immun. 30 no.3:22-26 Mr '59. (MIRA 12:5)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

(*PASTEURELLA TULARENSIS*,  
variability during preserv. (Rus))

OLESUF'YEV, N.G., prof.; RUDNEV, G.P., prof.; DUNAYEVA, T.N., kand.biolog.  
nauk; YEMEL'ANOVA, O.S., kand.biolog.nauk; MAYSKIY, I.N., prof.;  
MYASHNIKOV, Yu.A.; SAVEL'IEVA, R.A., kand.med.nauk; SIL'CHENKO,  
V.S., kand.med.nauk; KASIKOV, A.V., red.; BUL'DYATEV, H.A.,  
tekhn.red.

[Tularemia] Tularemia. Pod red. N.G.Olsuf'eva i G.P.Rudneva.  
Moskva, Gos.izd-vo med.lit-ry, 1960. 458 p.

(MIRA 14:4)

1. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for  
Olsuf'yev), 2. Deystvitel'nyy chlen Akademii meditsinskikh nauk  
SSSR (for Rudnev).

(TULAREMIA)

YEMEL'YANOVA, O.S.

Tularemia in white mice infected by a vaccinal strain. Zhur.  
mikrobiol.épid.i immun. 31 no.8:111-117 Ag '60. (MIRA 14:6)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN  
SSSR.

(TULAREMIA)

DUNAYEVA, T.N.; YEMEL'YANOVA, O.S.

Comparative determination of the diagnostic value of coagulated  
and liquid vitelline medium in the isolation of the causative agent  
of tularemia. Lab. devo 7 no.1:44-49 Ja '61. (MIRA 14:1)

1. Laboratoriya tulyaremii otdela prirodnoochagovykh infektsiy  
(rykovoditel' - akademik Ye.N. Pavlovskiy) Instituta epidemiologii  
i mikrobiologii imeni N.F. Gamalei AMN SSSR, Moskva.  
(BACTERIOLOGY—CULTURES AND CULTURE MEDIA).  
(PASTURELLA TULARENSIS)

YEMEL'YANOVA, O.S.

Virulence of tularemia microbes isolated from the human organism.  
Zhur. mikrobiol. epid. i immun. 32 no.5:61-66 My '61.

(MIRA 14:6)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN  
SSSR.

(PASTEURELLA TULARENSIS)

OLSUF'YEV, N.G.; YEMEL'YANOVA, O.S.; UGLOVOY, G.P.; SIL'CHENKO, V.S.; KHOROSHEV, I.G.; YEZHOOVA, Ye.N.; BESSONOVA, M.A.; VEDENEYEVA, Ye. V.; AREF'YEV, S.S.; SHELIANOVA, G.M.; SORINA, A.M.; BORODIN, V.P.; KOROLEVA, A.P.; SUVOROVA, A.Ye.; ONIKHIMOVSKAYA, V.A.; STOLYAROVA, A.D.; BYSTROVA, K.A.; REPINA, R.F.; MYASHNIKOV, Yu.A.; LEVACHEVA, Z.A.; YEGIAZARYAN, K.K.; RAVDONIKAS, O.V.; SARMANEYV, A.P.

Optimal periods for testing skin reaction in subjects inoculated against tularemia with a dry live vaccine and vaccinal, reactogenic and immunogenic properties of this preparation. Zhur. mikrobiol. epid. i immun. 32 no.6:92-98 Je '61. (MIRA 15:5)

1. Iz otdela prirodnoochagovykh infektsiy Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR, otdelov Osobu opasnykh infektsiy Voronezhskoy, Leningradskoy, Moskovskoy, Smolenskoy, Stalingradskoy, Tambovskoy, Tul'skoy, oblastnykh sanitarnykh epidemiologicheskikh stantsiy i Omskogo instituta epidemiologii, mikrobiologii i gigiyeny.  
(TULAREMIA) (VACCINES)

OLSUFYEV, N. G.; EMELYANOVA, O. S.

Further studies of strains of tularaemic bacteria of the old and new world. J. hyg. epidem. 6 no.2:193-205, '62.

1. Gamaleya Institute of Epidemiology and Microbiology, Academy of Medical Sciences of U.S.S.R., Tularaemia Laboratory of the Department for Natural Focal Infections, Moscow.

(TULAREMIA microbiology)

OLSUFJEV, N.G.; EMELYANOVA, O.S.

Immunological relationships between old and new world varieties  
of tularaemic bacteria. J. hyg. epidem. 7 no.2:178-187 '63.

1. Gamaleya Institute of Epidemiology and Microbiology, Tularaemia  
Laboratory of the Department for Natural Focal Infections, Academy  
of Medical Sciences of the U.S.S.R., Moscow.

(RABBITS) (GUINEA PIGS) (TULAREMIA) (IMMUNITY)

YEMEL'YANOVA, O.V.

Fractional erythrocyte sedimentation reaction in the dynamics of  
the pathological process in pneumonia in children. Vop. okh. mat. i  
det. 7 no.7:31-34 J1 '62. (MIRA 15:11)

1. Iz kafedry gospital'noy pediatrii (nauchnyy rukovoditel'  
raboty - doktor meditsinskikh nauk D.Ye.Sheyneberg) Sverdlovskogo  
meditsinskogo instituta.  
(PNEUMONIA) (BLOOD—SEDIMENTATION)

YEMEL'YANOVA, O.S.

Variability of the tularemia microbe in natural conditions. Zhur. mikrobiol., epid.i immun. 33 no.4:3-9 Ap '62. (MIRA 15:10)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.  
(PASTEURELLA TULARENSIS)

YEMEL'YANOVA, O.S.

Possibility of increasing the sensitivity of tularemia diagnosticum.  
Zhur.mikrobiol.epid.i immun. 33 no.5:84-88 My '62. (MIRA 15:8)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN  
SSSR.

(TULAREMIA)

YEMEL'YANOVA, O.S.; RAVDONIKAS, O.V.; YEGOROVA, L.S.; PANINA, N.V.;  
PILIPENKO, V.G.; RUDNEV, M.M.; SIL'CHENKO, V.S.; BESSONOVA, M.A.;  
UL'YANOVA, N.I.; VEDENEYEVA, Ye.V.; BORODIN, V.P.; SAMSONOVA, A.P.;  
MYASNIKOV, Yu.A.; LEVACHEVA, Z.A.

Approbation of an improved tularemia diagnosticum. Zhur.  
mikrobiol., epid. i immun. 40 no.10:85-92 O '63.

(MIRA 17:6)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamaleya  
AMN SSSR, Omskogo instituta prirodnoochagovykh infektsiy,  
Protivochumnogo instituta Kavkaza i Zakavkaz'ya, Voronezhskoy,  
Leningradskoy, Volgogradskoy, Tul'skoy sanitarno-epidemiologicheskikh  
stantsiy.

YEMEL'YANOVA, O.S.

Geographic variability of the pathogen of tularemia. Zhur. mikrobiol.  
epid. i immun. 41 no.3:7-11 Mr '64. (MIRA 17:11)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

ANANOVA, Ye.V.; YEMEL'YANOVA, O.S.

Use of the fluorescent-serological method for the detection of the microbe  
of tularemia. Lab. delo no.1:35-39 '64. (MIRA 17:4)

1. Laboratoriya tulyaremii otdela infektsiy s prirodnoy echagovost'yu  
Instituta epidemiologii i mikrobiologii im. N.F.Gamalei AMN SSSR.

*YEMEL'YANOVA, O. V.*

## PART I BOOK INFORMATION

Sov/416

Vsesoyuznoye sovetskoye po steklu i zhidkam soderzhanie. Izd. Nauka, 1957  
Radiotsvetnyy i spetsial'nyy trudy... (Rare Metals and Alloys) Transactions of the  
First All-Union Conference on Ferrous Alloys. Moscow: Metalurgizdat, 1960.  
Lip. p. 3,150 pages printed.

Supplementary documents: Akademika Sov. SSSR. Institut metalurgii. 1952  
Issledovaniya po nekot. metalam pri rasmashchivaniye kachestva.

Ed. I. I. Rostovtsev. Ed. of Publishing House: O. S. Lengizdat. 1951

PERIODIC. This collection of articles is intended for metallurgical engineers,  
practitioners, and workers in the machine-building and radio-industries.  
It may also be used by students of schools of higher education.

CONTENTS. The collection contains technical papers which were presented and discussed at  
one of the First All-Union Conferences on Ferrous Alloys held in the Institute  
of Metallurgy, Moscow, on December 1957. Results of  
investigations of rare metals are presented and discussed along with investigations of  
rare earths, vanadium, niobium, and tantalum. The effect of rare-earth metals  
on properties of aluminum alloys and steels is analyzed. The uses of vanadium  
as a deoxidizer, catalyst, desulfurizing material, and material suitable for  
special alloys for aircraft, electrical systems are discussed. Also, the effect  
of the addition of rare elements on the properties of heat-resistant  
steels is studied and changes in their physical properties (particularly  
conductivity, alloying) are determined. No recommendations are mentioned. Sov. p.

## PART II. IRON AND COPPER-ALLOY

ALLOYS WITH RARE-EARTH ADDITIONS

## Rare Metals (Cont.)

Sov/416

Lobanova, I. T., I. G. Koval'yev, and O. I. Sosulinova. Wrought Magnesium Alloys  
Sov. Metallovedenie i Metalurgiya. 209

Nikulin, I. M., I. A. Shchelina, and I. A. Noskovskaya. Magnesium Casting Alloys  
Sov. Metallovedenie i Metalurgiya. 219

Polyakova, M. V., Mel'nikov, Z. I., and V. V. Pashchenko. Ferromanganese and I. M.  
Kozhevnikov. Investigation of Properties of Magnesium-Alloyed Cast Iron. Sov. Metallovedenie i Metalurgiya. 227

Armenyan, F. G. Preparation Alloys With Rare Metals  
Sov. Metallovedenie i Metalurgiya. 230

Rubtsova, I. N., and V. N. Dubovitskaya. Effect of Rare-Earth and Alkaline-Earth  
Metals on Mechanical Properties of Magnesium Alloys at the Temperature Range  
200 and 400°C. Sov. Metallovedenie i Metalurgiya. 239

PART V. RARE METALS IN STEELS  
Effect of Rare-Earth Metals on Sulfur Distribution and  
Sulfur Distribution in Chemical-Mechanical-Magnesium Steel  
Sov. Metallovedenie i Metalurgiya. 269

Card 6/1

27.12.20

2320

AUTHOR: Yemel'yanova, O. V. and Geyntse, Ye. A.

39561  
S/205/62/002/003/007/015  
1021/I221

TITLE: Effect of ionizing radiation on established antitoxic and antimicrobial immunity

PERIODICAL: Radiobiologiya, v.2, n. 3, 1962, 434-436

TEXT: Since there is a disagreement in views on the effect of radiation on antimicrobial and antitoxic immunity the authors studied this effect in rabbits with a new polyvaccine composed of antigens from shigella and typhoid bacteria and botulinus, tetanus and gas gangrene toxoids. The rabbits were irradiated with Co<sup>60</sup> gamma rays (600 r) 10-12 days after vaccination. The radiation damage was characterized by loss of weight, leucopenia, and death. Immunized rabbits were more resistant to radiation than nonimmunized; 15.5% of the former group died after irradiation compared with 48% of the latter group. Irradiation of immunized rabbits did not affect their antitoxic immunity. Rabbits irradiated at the time of revaccination developed two times less antitoxin than control animals.

Antimicrobial immunity was examined in mice irradiated with X-rays (450 r) and it was found that immunized mice were more resistant to radiation damage than nonimmunized. On the other hand, mice irradiated after vaccination were more sensitive to a challenge with S. typhi strain Ty<sub>2</sub> than non irradiated.

ASSOCIATION: Voenno-meditsinskaya ordena Lenina Akademiya im. Kirova (Military Medical Order of Lenin, im. C. M. Kirov College) Leningrad

SUBMITTED: November 19, 1958

Card 1/1

X

YANOVICH, O.V.

Fractional reaction of erythrocyte sedimentation in healthy  
children. Pediatr. no. 7:55-59 '62. (MIRA 15:12)

1. Iz kafedry gospital'noy pediatrii Sverdlovskogo gosudarst-  
vennogo meditsinskogo instituta (dir. - prof. A.F. Zverev,  
nauchnyy rukovoditel' - doktor med.nauk D.Ye. Sheynberg).  
(BLOOD—SEDIMENTATION)

YEMEL'YANOVA, O. V.; GEYNSE, Ye. A.

Effect of ionizing radiation on the developed antitoxic and  
antimicrobic immunity. Radiobiologija 2 no.3:434-436 '62.  
(MIRA 15:7)

1. Voyenno-meditsinskaya ordena Lenina akademiya imeni S. M.  
Kirova, Leningrad.

(GAMMA RAYS—PHYSIOLOGICAL EFFECT)  
(IMMUNITY)

ACC NR:

AF6021586

(N)

SOURCE CODE: UR/0402/66/000/003/0372/0372

AUTHOR: Yemel'yanova, O. V.

ORG: Leningrad Scientific-Research Institute of Vaccines and Sera (Leningradskiy nauchno-issledovatel'skiy institut vaktsin i syvorotok)  
TITLE: Using the complement-fixation reaction in studying the circulation of influenza antigens in the blood of immunized animals

SOURCE: Voprosy virusologii, no. 3, 1966, 372

TOPIC TAGS: animal disease, influenza, complement fixation reaction, disease diagnosis antigen, disease control, BLOOD CIRCULATION, ANTIGEN, IMMUNOLOGY

## ABSTRACT:

The complement-fixation reaction aids the location of antigens in the blood of immunized white mice, rats, guinea pigs, and horses. Complement fixation occurs in 18—20 hr at 2—4°C, up to 21 days after a single immunization. In multiple immunization the antibodies accumulate in the blood in proportion to the size of the dose. This technique is suggested as an aid to planning animal inoculation schedules and in the production and use of therapeutic sera.

[W.A. 50; CBE No. 10]

SUB CODE: 06/ SUBM DATE: none/

Card 1/1

L 4151-66 EWT(m)/EPF(c)/T/EWP(t)/EWP(b) IJP(c) JD/JG/WE

ACC NR: AP5024949

UR/0065/65/000/010/0029/0031

655.53:546.881:547.54

15  
24  
B

AUTHOR: Kotova, A. V.; Yemel'yanova, S. V.; Ben'kovskiy, V. G.

TITLE: Removal of vanadium from petroleum and petroleum products by aqueous solutions of sulfonic acids

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 10, 1965, 29-31

TOPIC TAGS: vanadium, vanadium compound, petroleum refining, petroleum product, metal extracting

ABSTRACT: Aqueous solutions of p-toluenesulfonic, o-sulfobenzoic, and sulfanic acid were used to extract vanadium from several types of petroleum and petroleum products (kerosene-gas oil fraction and diesel fuel). The optimum concentration of the extracting solutions and the number of extractions were determined for each type. To elucidate the nature of the vanadium compounds present in the petroleum and petroleum products, the presence of the vanadium-porphyrin complex was investigated by spectrophotometric analysis of alcohol extracts in the 400-750 m $\mu$  range. When this complex was present, the extraction of vanadium was lower than in its absence. It is thought that the side chains of the porphyrins, which are relatively high-molecular compounds and are present in some of the types of petroleum studied, interfere with the extraction of vanadium by aqueous solutions of organic acids. When the porphyrins are absent, vanadium is assumed to be present in the form of salts of organic acids, and is therefore easy to extract in this manner. Orig. art. has: 3 tables.

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L 4151-66

ACC NR: AP5024949

ASSOCIATION: Institut khimii nesti i prirodnikh soley AN Kazakh. SSR (Institute of Petroleum  
Chemistry and Chemistry of Natural Salts, AN Kazakh. SSR)

SUBMITTED: 00

ENCL: 00

SUB CODE: GC, FP

NO REF SOV: 005

OTHER: 004

Card

2/2

SOV/112-59-3-4397

8(0)

Translation from: Referativnyy zhurnal. Elekrotehnika, 1959, Nr 3, p 16 (USSR)

AUTHOR: Yemel'yanova, T. A.

TITLE: Enamelled Wire with Fluoroplastic Insulation  
(Emal'provoloka s izolyatsiyey iz fluoroplastov)

PERIODICAL: Tr. N.-i. in-ta kabel'n. prom., 1957, Nr 2, pp 146-151

ABSTRACT: Use of fluoroplastic-3 and a modified fluoroplastic-3 for enameling copper wire is considered. An alcohol-water suspension of fluoroplastic-3 with 0.3% of velan added to increase stability serves as a primary material. An experimental enameling outfit does not differ in principle from existing industrial enameling furnaces but permits wide control of the furnace temperature and the rate of passing wire, and is also equipped with a special hardening device. A 5-time dipping method is used for enameling; after that, the insulating layer is melted again (in the hardening furnace) and is chilled. The fluoroplastic-suspension bath is situated at a distance of 1 m from the furnace

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SOV/112-59-3-4397

8(0)

**Enameled Wire with Fluoroplastic Insulation**

entrance, which insures evaporation of the suspension liquid phase. Tests of samples of fluoroplastic-3 insulated wire revealed that its working temperature should be set not higher than 100°C because at higher temperatures, noticeable crystallization takes place. Abrasion resistance of the fluoroplastic-3 wire is approximately 2-3 times less than that of PEV wire. The elasticity factor (ratio of the diameter of a rod upon which the wire can be wound without noticeable cracks to the diameter of the copper conductor) has risen from 1.0 to 1.5, on the average, after the wire has been kept for 30 days at a temperature of 100°C. At 125°C, this factor reaches 5 after two days, and at 150°C, it is over 10. The wire properties do not change after a one-day immersion in various solvents (gasoline, benzene, toluene, turpentine, ethyl, cellosolve, etc.) or after a 5-minute boiling in the 15% solution of phenole. Long-time immersion of the wire samples in water did not bring about any change in their insulation resistance. However, it proved impossible to produce the insulating

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SOV/112-59-3-4397

8(0)

Enameled Wire with Fluoroplastic Insulation

coating without pitting even when its double thickness was increased from 0.04 to 0.09 mm. The modified fluoroplastic-3 has a lesser tendency to crystallize because it has a more branched molecular chain. For that reason, the modified-fluoroplastic-3 insulated wires are not inferior to those having fluoroplastic-3 insulation as far as mechanical strength, chemical resistance, watertightness, and electric strength are concerned, and they are superior to the latter in their heat-resistance properties (up to +150°C).

P.I.Z.

Card 3/3

ACCESSION NR: AT4040416

S/0000/64/000/000/0117/0132

AUTHOR: Bokshteyn, S. Z.; Yemel'yanova, T. A.; Kishkin, S. T.; Mirskiy, L. M.

TITLE: Structural characteristics and diffusion mobility in titanium alloys in various phase states

SOURCE: Protsessy\* diffuzii, struktura i svoystva metallov (Diffusion processes, structure and properties of metals); sbornik statey. Moscow, Izd-vo Mashinostroyeniye, 1964, 117-132

TOPIC TAGS: titanium, titanium alloy, titanium manganese alloy, alloy VT3-1, alloy VT15, diffusion mobility, carbon diffusion, nickel diffusion, molybdenum diffusion, alloy structure, martensite

ABSTRACT: Previous investigations have indicated that, during autodiffusion and diffusion of various elements in metal alloys, displacements of the atoms occur mainly along the grain boundaries. However, during diffusion of iron, chromium, and tin in titanium under certain conditions, a predominantly intragranular and non-uniform diffusion has been observed. In this connection, the authors experimented with titanium alloys VT3-1, VT15 and Ti + 3.83% Mn the structural characteristics occurring during B- $\alpha$ 

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ACCESSION NR: AT4040416

transformation, as well as to compare the diffusional permeability of titanium-base alloys in various phase states. The results of radiographic and microscopic studies showed that in the process of  $B \rightarrow \alpha$  transformation according to martensitic kinetics, substantial disruption of the crystalline structure occurs at the  $\alpha'$  limit, producing changes which remain stable on subsequent heating and provide ways of increasing the diffusional mobility. A study of the distribution of carbon and nickel in the alloys led to the following conclusions: a) during diffusion in the  $\beta$  region of titanium-manganese alloys, carbon is distributing uniformly along the grain boundaries without perceptible segregation; b) during continuous cooling of this alloy from the  $\beta$  region, a rapid displacement of carbon atoms occurs toward the  $\alpha'$  limit; c) after isothermal transformation of the  $\beta$  phase and formation of equiaxial  $\alpha$  plus retained  $\beta$ , a uniform intragranular distribution of carbon takes place, whereby carbon diffuses preferably into the  $\alpha$  phase; d) during diffusion of nickel into the  $\alpha$  phase of the VT3-1 alloy, concentrations of atoms occur on the boundaries of the acicular formations of this phase. Only after prolonged annealing at a subcritical temperature, when the polyhedral  $\alpha$  phase is formed, does diffusion proceed preferably along the grain boundaries. However, even in this case, some non-uniform intragranular diffusion still takes place. A comparison of the diffusional permeability in titanium-base alloys in various phase states led to the conclusion that: a) the mobility of molybdenum during diffusion in the  $\beta$  phase of VT15 alloy is lower than during diffusion in the heterophasic

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ACCESSION NR: AT4040416

region of this alloy; b) the diffusional permeability of the equiaxial  $\alpha$  phase in VT3-1 alloy is lower than the diffusional permeability of the acicular  $\beta$  phase. Recrystallization of the  $\beta$  phase in VT3-1 alloy thus leads to an increase in the diffusional mobility of the atoms. Orig. art. has: 10 figures and 2 tables.

ASSOCIATION: None

SUBMITTED: 09Dec63

SUB CODE: MM

DATE ACQ: 28May64

NO REF SOV: 005

ENCL: 00

OTHER: 001

3/3

ACCESSION NR: AT4040421

S/000/64/000/000/0177/0182

AUTHOR: Bokshteyn, S. Z.; Glazunov, S. G.; Yemel'yanova, T. A.;  
Kabanov, Yu. N.; Kishkin, S. T.; Mirskiy, L. M.TITLE: Thermomechanical treatment of titanium alloys with  $\beta$ -structureSOURCE: Protsessy\* diffuzii, struktura i svoystva metallov (Diffusion  
processes, structure, and properties of metals); sbornik statey.  
Moscow, Izd-vo Mashinostroyeniye, 1964, 177-182TOPIC TAGS: titanium alloy, beta structure, mechanical property, thermo-  
mechanical treatment, thermomechanical treatment effectABSTRACT: The effect of thermomechanical treatment on the mechanical  
properties of  $\beta$ -titanium alloys VT15 (3.76% Al, 7.80 Mo, 10.7% Cr) and  
V-120 (US alloy, 3.1% Al, 11.6% Cr, 12.6% V) were investigated. Al-  
loy specimens were held at 760C for 30 minutes, then rolled with a  
reduction of either 10 or 45% and immediately quenched (high tempera-  
ture thermomechanical treatment, HTTMT) or they were cooled at 350C,  
held for 2—3 minutes, rolled with a reduction of 10 or 40%, and

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ACCESSION NR: AT4040421

immediately quenched. In both cases, quenching was followed by aging at 450C for 25 or 50 hr. The mechanical properties of differently treated alloys are shown in Table 1 of the Enclosure. In stress rupture tests [apparently at 400C] under a stress of 100 kg/mm<sup>2</sup>, the VT15 alloy had a rupture life of 13.5—15.0 hr, elongation of 17.2—19.0%, and a reduction of area of 49.0—51.5% after HTTMT. The V-120 alloy similarly treated had a rupture life of 97—100 hr. Orig. art. has: 5 figures and 4 tables.

ASSOCIATION: none

SUBMITTED: 09Dec63

ATD PRESS: 3049

ENCL: 01

SUB CODE: MM

NO REF SOV: 000

OTHER: 001

Card 2/3

ENCLOSURE: 01

ACCESSION NR: AT4040421

Table I. Mechanical properties of VTS titanium alloy

Treatment	Reduction %	Aging, hrs	Test Temperature, °C	Tensile Strength, Kg/mm <sup>2</sup>	Yield Strength, Kg/mm <sup>2</sup>	Elongation, %	Reduction of Area %	Notch Toughness, Kg/cm <sup>2</sup>
HTMT	10	25	20	153	146	3.0	11.3	1.7
	10	25	400	127	-	5.2	31.3	-
	10	50	20	147	141	2.6	7.6	1.2
	10	50	400	117	-	3.0	31.3	-
	45	25	20	159	155	3.0	10.6	1.1
	45	25	400	123	-	6.0	38.2	-
	45	50	20	152	149	4.2	12.1	1.3
	45	50	400	-	-	-	-	-
LTHT	45	25	20	100	155	3.1	23.0	1.0
	45	25	400	124.3	-	3.5	21.2	-
	45	50	20	154	148	3.9	11.0	1.1
	45	50	400	122	-	6.0	23.8	-
	-	-	-	-	-	-	-	-
Annealing at 760°C, water quenched	-	25	20	126	122	7.8	31.2	-
	-	25	400	118	-	6.0	28.0	-
	-	50	20	134	128	6.2	16.7	-
	-	50	400	122	-	6.0	33.0	-

Card: 3/3

LOGINOV, A., kand.pedagog.nauk; KOVACH, S.K. (g.Satanov, Khmel'nitskoy obl.); BAYEV, S.Ya., uchitel'; POPOVA, A.N., uchitel'nitsa; ZAMULIN, G.T.; YEMEL'YANOVA, T.I.; PYATNITSKIY, M.P.; YAROSHCHUK, N.A., uchitel'; CHISTYAKOV, V.M., uchitel'; LENSHIN, A.S. (g. Novosibirsk); NOSKOV, V.I., (g.Feodosiya); RUD', K.A., uchitel'nitsa; VASIK, G.Ye., uchitel'; GAPONENKO, I.M.

Editor's mail. Khim. v shkole 15 no.3:73-78 My-Je '60. (MIRA 14:7)

1. Pedinstitut, g. Ulan-Bator (for Loginov). 2. Ordzhonikidzevskaya srednyaya shkola No.5, Stavropol'skiy kray (for Bayev). 3. Nikiforovskaya shkola sel'skoy molodezhi, Tambovskoy oblasti (for Popova).
4. Pedagogicheskiy institut g. Krasnodara (for Zamulin, Yemel'yanova, Pyatnitskiy). 5. Srednyaya shkola No.8, g. Vinnitsy (for Yaroshchuk). 6. Srednyaya shkola sovkhoza "Spartak" Saratovskoy obl. (for Chistyakov). 7. Srednyaya shkola No.14 g. Stalina (for Rud'). 8. Shkola No.569 g. Moskvy (for Vasik). 9. Pedagogicheskiy institut, g. Novozybkov (for Gaponenko).

(Chemistry—Study and teaching)

SERGIYEVSKIY, M.V.; YEMEL'YANOVA, T.M.

Effect of different combinations of proprioceptive reflexes from  
muscles of fore- and hindlegs on the respiration of a frog. Nauk  
zap. Kyiv. un. 16 no.17:187-193 '57. (MIRA 13:2)  
(RESPIRATION) (REFLEXES)

KOFMAN, David Markovichdots.; TROFIMOV, Ivan Romanovich;  
TRUYEVTSOV, N.N., inzh.; EFROS, B.Ye., red.; YEMEL'YANOVA,  
T.M., red.; ZOLOTAREVA, I.Z., tekhn. red.

[Carding machines for cotton manufacture; their design,  
maintenance, repair and operation] Chesal'nye mashiny  
khlopkopriadil'nogo proizvodstva; ustroistvo, remont i ob-  
sluzhivanie. Moskva, Gizlegprom, 1963. 163 p.  
(MIRA 16:12)

(Carding machines)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962630006-8

YEMEL'YANOV, V.A., kand. sel'skokhoz. nauk

Engineering geological evaluation of soils under ponds in  
the forest-steppe and steppe zones in the European part of  
the U.S.S.R. Trudy VNIIGIM 42:31-44 '63. (MIRA 17:6)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962630006-8"

YEMEL'YANOV, V.A., inzh.; KLYUCHNIKOV, A.D., kand. tekhn. nauk, dotsent

Analysis of heat conditions in the thermal treatment of a  
material in a smelting cyclone. Izv. vys. ucheb. zav.;  
energ. 7 no.7:41-47 J1 '64 (MIRA 17:8)

1. Moskovskiy ordena Lenina energeticheskiy institut. Predstav-  
lena kafedroy ognevoy promyshlennosti teplotekhniki.

YEMEL'YANOVA, V.G.  
PAVLOV, Ivan Vasil'yevich; YEMEL'YANOVA, V.G., red.; ASTAKHOVA, I.V.,  
tekhn.red.

[New developments in collective farm democracy] Novoe v kolkhoznoi  
demokratii. Izd. 2-oe, dop. i perer. Moskva, Gos.izd-vo iurid.  
lit-ry, 1957. 42 p.  
(Collective farms)

PAVLOV, Ivan Vasil'yevich XEMEL'YANOVA, V.G., red.; TARASOVA, N.M., tekhn.  
red.

[Legal forms of business accounting on collective farms] Pravovye  
formy vnutrennego khozrascheta v kolkhozakh. Moskva, Gos. izd-vo  
jurid. lit-ry, 1961. 47 p.  
(MIRA 14:8)  
(Collective farms—Finance)

VOLKOV, Aleksandr Ivanovich; YEMEL'YANOVA, V.G., red.; TIMOFEYeva, N.V.,  
tekhn. red.

[The rights and duties of collective farms in regard to the development of their communal economy; based on materials of the plenary session of the Central Committee of the CPSU in January 1961] O pravakh i obiazannostях kolkhozov po rasvitiu obshchestvennogo proizvodstva; po materialam ianvar'skogo (1961 g.) Plenumma TsK KPSS. Moskva, Gos. izd-vo iurid. lit-ry, 1961. 63 p. (MIRA 14:9)

(Collective farms)

PAVLOV, Ivan Vasil'yevich; YEMEL'YANOVA, V.G., red.; TARASOVA, N.M.,  
tekhn. red.

[Development of democracy on collective farms during the period  
of large-scale building of communism] Razvitiye kolkhoznoi demokra-  
tii v period razvernutogo stroitel'stva kommunizma. Moskva, Gos-  
urisdat, 1962. 203 p.  
(Collective farms--Management)

YEMEL'YANOVA, V.M.

USSR/Kinetics - Combustion. Explosions. Topochemistry. Catalysis. B-9

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18637

Author : G.M. Panchenkov, Z.V. Gryaznova, V.M. Yemel'yanova.

Inst : Academy of Sciences of USSR.

Title : Study of Cumene Cracking on Deuterized Alumosilicate Catalysts.

Orig Pub : Dokl. AN SSSR, 1956, 109, No 2, 325-328

Abstract : Cumene cracking was investigated in a flow system at 450° or three deuterized catalysts:  $\text{Al}_2\text{O}_3$  (I),  $\text{SiO}_2$  (II) and an alumosilicate catalyst (III) of the composition 32.75% of  $\text{Al}_2\text{O}_3$  and 67.25% of  $\text{SiO}_2$  prepared of the same gels as I and II. The determination of the quantitative composition of the reaction products and their contents of deuterium was carried out. It was found that the speed of hydrogen interchange between the catalyst III and cumene at 350 to 500° did not depend much on the temperature and that it was very close to the interchange

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USSR/Kinetics - Combustion. Explosions. Topochemistry. Catalysis. B-9

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18637

speed of the reaction products - benzene, propylene and their equimolecular mixtures - under analogous conditions. The authors assume that the deuterium interchange reaction on the catalyst III was independent and proceeded independently of the cracking reaction. The interchange reaction was observed on I under corresponding conditions, but the cracking reaction did not take place; none of these reactions occurred on II.

D. V. Kostylev  
Lomonosov Polytechnic Academy M. V.  
Kazanskii

Card 2/2

- 281 -

PANCHENKO, G. M., GRYAZNOVA, Z. V., YEMEL'YANOVA, V. M., GANICHENKO, L. G.

"Conversion of Hydrocarbons on Deuterated Aluminosilicate Catalysts?"

Problemy Kinetiki i Katalizis, v. 9, Isotopos in Katalizis, Moscow, Izd-vo  
AN SSSR, 1957, 442p.

Most of the papers in this collection were presented at the Conf. on  
Isotopes in Catalysis which took place in Moscow, Mar 31 - Apr 5, 1956.

BABUSHKIN, A.A.; GUSIEVA, N.G.; YEMEL'YANOVA, V.M.

Infrared spectra of molecular compounds composed of boron trifluoride and various amines. *Fiz. sbor.* no.3:212-213 '57.  
(MIRA 11:8)

1. Moskovskiy ordena Lenina i ordena Trudovogo Krasnogo Znameni  
gosudarstvennyy universitet im. M.V. Lomonosova i Institut  
fizicheskoy khimii AN SSSR.

(Amine--Spectra)  
(Boron fluoride--Spectra)

YEMEL'YANOVA, V.M.

PANICHUKOV, O.M.; GRYAZNOVA, Z.V.; YEMEL'YANOVA, V.M.; GANICHENKO, L.O.

Conversion of hydrocarbons on deuteriated alumino silicate catalysts.  
Probl. khim. i kat. 9:145-151 '57. (MIRA 11:3)  
(Deuterium) (Catalysts) (Chemical reaction, Rate of)

Sov/51-4-4-6/24

AUTHORS: Babushkin, A.A., Kovalev, I.F. and Yemel'yanova, V.M.

TITLE: Investigation of the Vibrational Spectra of Molecular Compounds of Boron Trifluoride with Substances Containing Nitrogen and Oxygen. I.  $F_3B.NH_3$  and  $F_3B.ND_3$   
(Issledovaniye kolebatel'nykh spektrov molekulyarnykh soyedineniy trekhfitoristogo bora s azot- i kislorod-soderzhashchimi veshchestvami. I.  $F_3B.NH_3$  i  $F_3B.ND_3$ )

PERIODICAL: Optika i Spektroskopiya, 1958, Vol IV, Nr 4,  
pp 468-473 (USSR).

ABSTRACT: Boron trifluoride was obtained by decomposition of  $C_6H_5N_2.BF_3$ . Purity of boron trifluoride was checked spectrally and only  $SiF_4$  in an amount smaller than 0.5% was found.

Molecular compounds of boron trifluoride with ammonia and deuteroammonia were obtained by condensation of ammonia (or deuteroammonia) on freezing by means of liquid nitrogen in an ether complex of boron trifluoride,  $(C_2H_5)_2O.BF_3$ , in a metal test tube. A white crystalline substance was obtained which was re-crystallised in water (or heavy water) or in acetone. In re-crystallisation of  $F_3B.ND_3$  from acetone, a

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Sov/51-4-4-6/24

## Investigation of the Vibrational Spectra of Molecular Compounds of Boron Trifluoride with Substances Containing Nitrogen and Oxygen.

I.  $F_3B.NH_3$  and  $F_3B.ND_3$ 

replacement of deuterium by hydrogen occurred and a mixture of compounds with different degrees of replacement of hydrogen, by deuterium was obtained. This mixture was denoted by the formula  $F_3B.NH_iD_k$ , where  $i$  and  $k$  may have the values 0,

1, 2, 3 and  $i + k = 3$ . The spectra were recorded using a spectrometer IKS-11 in the region from 2.5 to 15  $\mu$ . To avoid absorption by atmospheric water vapour and carbon dioxide, nitrogen was passed through the spectrometer. Samples were prepared by placing a layer of paste of the substance studied between two plates of rock-salt or by placing a dry layer of the substance between the same plates. Raman scattering spectrum of an aqueous solution of the molecular compound  $F_3B.NH_3$  was recorded by means of a spectrograph ISP-51 with a photoelectric attachment UF-320. The infra-red absorption spectra of  $F_3B.NH_3$  and  $F_3B.ND_3$  are shown in Figure 1. Calculations of the force field and vibrational spectra were based on molecular models with  $C_{3v}$  symmetry for  $F_3B.NH_3$  and  $F_3B.ND_3$  (Figure 2)

Card2/4

Sov/51-4-4-6/24

Investigation of the Vibrational Spectra of Molecular Compounds of Boron Trifluoride with Substances Containing Nitrogen and Oxygen.

I.  $F_3B.NH_3$  and  $F_3B.ND_3$

and  $C_s$  symmetry for  $F_3B.NH_2D$  and  $F_3B.NHD_2$ . To calculate the force constants, the authors used their own experimental results on the Raman and infra-red spectra of  $F_3B.NH_3$  and  $F_3B.ND_3$  (see table on p 471). The observed frequencies for the mixture denoted by  $F_3B.NH_iD_k$  were used to check the calculations. The force field for  $F_3B.NH_3$  was calculated by the method of Vol'kenshteyn, Yel'yashevich, Stepanov (Ref 18) and Mayants (Ref 13) using "spectroscopic masses" for hydrogen and deuterium. From 49 force constants, which determine the potential function 18 were taken to be equal to zero. The calculated force constants are given at the top of p 473. They were calculated using the BESM computer of the Ac.Sc. USSR. The table on p 471 shows that there is good agreement between the observed frequencies and those obtained by calculation using the force constants. The authors also calculated the coefficients of induction which

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Sov/51-4-4-6/24

Investigation of the Vibrational Spectra of Molecular Compounds of  
Boron Trifluoride with Substances Containing Nitrogen and Oxygen,  
I.  $F_3B.NH_3$  and  $F_3B.ND_3$

are given in the middle of p 473. The authors thank  
A.I. Shatenshteyn for supply of deuterated ammonia and  
R.I. Podlovchenko for help in carrying out the calculations  
on the computer. There are 2 figures, 1 table and 19  
references, 6 of which are Soviet, 8 in English, 2 German,  
1 French, 1 translation of Western work into Russian and  
one other.

ASSOCIATION: Institut fizicheskoy khimi AN SSSR (Institute of  
Physical Chemistry, Ac.Sc. USSR), Saratovskiy  
pedagogicheskiy institut (Saratov Pedagogical  
Institute) and Moskovskiy gosudarstvenny universitet  
(Moscow State University)

SUBMITTED: June 14, 1957  
Card 4/4

1. Boron florides--Spectra